

RETAINING MICROFLUIDIC MICROCAVITY AND OTHER MICROFLUIDIC STRUCTURES**Patent number:** EP1483052**Publication date:** 2004-12-08**Inventor:** ANDERSSON PER (SE); EKSTRAND GUNNAR (SE)**Applicant:** GYROS AB (SE)**Classification:****- international:** B01L3/00; B01L3/00; (IPC1-7): B01L3/00**- european:****Application number:** EP20020763153 20020828**Priority number(s):** WO2002SE01539 20020828; SE20010003522 20011021; SE20010004077 20011205; WO2002SE00531 20020319; WO2002SE00538 20020319; WO2002SE00539 20020319; WO2002SE00537 20020319; SE20020001310 20020430; US20010315471P 20010828; US20010004424 20011206; US20020376776P 20020430[Report a data error here](#)

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(72) Inventors; and

(75) Inventors/Applicants (for US only): ANDERSSON, Per [SE/SE]; Botvidsgatan 3 C, S-753 29 Uppsala (SE). EK-STRAND, Gunnar [SE/SE]; Gräslöksgatan 18, S-754 46 Uppsala (SE).

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(74) Agent: BERGANDER, Håkan; Gyros AB, Uppsala Science Park, SE-751 83 Uppsala (SE).

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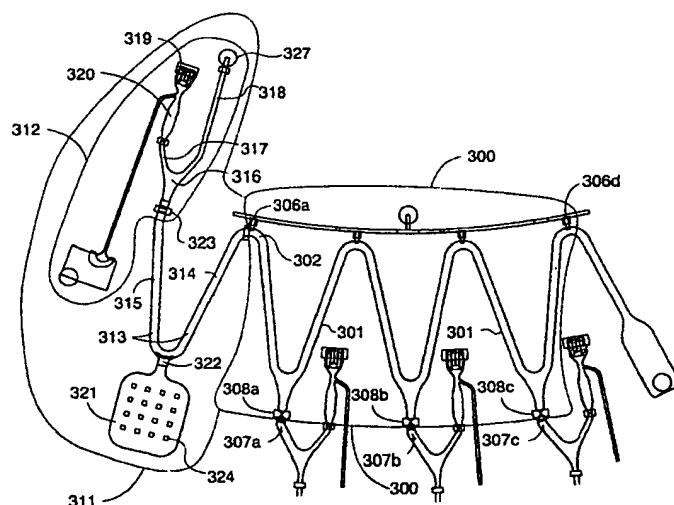
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(71) Applicant (for all designated States except US): GYROS AB [SE/SE]; Uppsala Science Park, S-751 83 Uppsala (SE).

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(57) Abstract: A microfluidic device that comprises several microchannel structures in which there are an inlet port, an outlet port and there between a structural unit comprising a fluidic function. The structural unit can be selected amongst units enabling a) retaining of nl-aliquots comprising constituents which has been defined by mixing of aliquots within the microfluidic device (unit A), b) mixing of aliquots of liquids (unit B), c) partition of larger aliquots of liquids into smaller aliquots of liquids into smaller aliquots of liquids and distributing the latter individually and in parallel to different microchannel structure of the same microfluidic device (unit C), d) quick penetration into a microchannel structure of an aliquot of a liquid dispensed to an inlet port of a microchannel structure (unit D), and e) volume definition integrated within a microchannel structure (unit E). In the preferred variants the device is adapted for using centrifugal force possibly combined with capillarity for driving liquid flow within the microchannel structures.

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